

## Emulsion-treating Agents

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**Objective:** To break or destabilize emulsified oil into separate oil and water phases. Can be used to prevent emulsion formation, increasing oil recovery rates, extending the window for dispersant application, or making burning possible.

**Description:** Emulsion-treating agents are surfactants that are applied to emulsified oil at low concentrations (0.1-2 percent). They can be injected into skimmer reservoirs to break the emulsion as it is skimmed from the water. They can be sprayed (similar to dispersants) directly onto slicks to break or prevent emulsions, although this type of application has not been successfully used in the field.

**Applicable Habitat Types:** On all water environments where emulsified oil is present.

**When to Use:** Where storage capacities are very limited, to separate the recovered, emulsified oil and water so that the water can be treated and discharged. On floating slicks, where emulsified oil can reduce skimmer efficiency and dispersant effectiveness.

**Biological Constraints:** There is insufficient information to fully evaluate biological constraints. Use in shallow water could affect benthic resources. Responders should avoid directly spraying any wildlife, especially birds or fur-bearing marine mammals.

## Emulsion-treating Agents (cont.)

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- Environmental Effects: Because this is a new method, there are few data available to evaluate environmental effects. Effective dosages are one to two orders of magnitude lower than dispersants. Environmental concerns include the potential for increased oil content of separated water; whether the oil will be more readily dispersed; and how the treated oil will behave upon contact with skimming equipment, birds, mammals, and shorelines.
- Waste Generation: May enable recycling of oil/water mixtures by breaking down emulsions.